

## **Chapter 173-407 - WAC**

### **Carbon Dioxide Mitigation Program**

### **For Fossil Fueled Thermal Electric Generating Facilities**

#### **173-407-010 Policy and Purpose**

1. It is the policy of the state to require mitigation of the emissions of carbon dioxide (CO<sub>2</sub>) from all new or modified fossil fueled thermal electric generating facilities.
2. A fossil fueled thermal electric generating facility is not subject to the requirements of Chapter 173-401 WAC solely due to its emissions of CO<sub>2</sub>.
  - (a) emissions of other regulated air pollutants must be a large enough quantity to trigger those requirements.
  - (b) for fossil fueled thermal electric generating facilities that are subject to WAC 173-401, the CO<sub>2</sub> mitigation requirements are an applicable requirement under that regulation.
3. A fossil fueled thermal electric generating facility not subject to the requirements of Chapter 173-401 WAC is subject to the requirements of the registration program in Chapter 173-400 WAC.

#### **173-407-020 Definitions**

The definitions in this section are found in RCW 80.70.010 and apply throughout this chapter unless clearly stated otherwise. The definitions are reprinted below.

(1) "Applicant" has the meaning provided in RCW 80.50.020 and includes an applicant for a permit for a fossil-fueled thermal electric generation facility subject to RCW 70.94.152 and [80.70.020](#)(1) (b) or (d).

(2) "Authority" means any air pollution control agency whose jurisdictional boundaries are coextensive with the boundaries of one or more counties.

(3) "Carbon credit" means a verified reduction in carbon dioxide or carbon dioxide equivalents that is registered with a state, national, or international trading authority or exchange that has been recognized by the council.

(4) "Carbon dioxide equivalents" means a metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential.

(5) "Cogeneration credit" means the carbon dioxide emissions that the council, department, or authority, as appropriate, estimates would be produced on an annual basis by a stand-alone industrial and commercial facility equivalent in operating characteristics and output to the industrial or commercial heating or cooling process component of the cogeneration plant.

(6) "Cogeneration plant" means a fossil-fueled thermal power plant in which the heat or steam is also used for industrial or commercial heating or cooling purposes and that meets

federal energy regulatory commission standards for qualifying facilities under the public utility regulatory policies act of 1978.

(7) "Commercial operation" means the date that the first electricity produced by a facility is delivered for commercial sale to the power grid.

(8) "Council" means the energy facility site evaluation council created by RCW 80.50.030.

(9) "Department" means the department of ecology.

(10) "Fossil fuel" means natural gas, petroleum, coal, or any form of solid, liquid, or gaseous fuel derived from such material to produce heat for the generation of electricity.

(11) "Mitigation plan" means a proposal that includes the process or means to achieve carbon dioxide mitigation through use of mitigation projects or carbon credits.

(12) "Mitigation project" means one or more of the following:

(a) Projects or actions that are implemented by the certificate holder or order of approval holder, directly or through its agent, or by an independent qualified organization to mitigate the emission of carbon dioxide produced by the fossil-fueled thermal electric generation facility. This term includes but is not limited to the use of, energy efficiency measures, clean and efficient transportation measures, qualified alternative energy resources, demand side management of electricity consumption, and carbon sequestration programs;

(b) Direct application of combined heat and power (cogeneration);

(c) Verified carbon credits traded on a recognized trading authority or exchange; or

(d) Enforceable and permanent reductions in carbon dioxide or carbon dioxide equivalents through process change, equipment shutdown, or other activities under the control of the applicant and approved as part of a carbon dioxide mitigation plan.

(13) "Order of approval" means an order issued under RCW 70.94.152 with respect to a fossil-fueled thermal electric generation facility subject to RCW [80.70.020](#)(1) (b) or (d).

(14) "Permanent" means that emission reductions used to offset emission increases are assured for the life of the corresponding increase, whether unlimited or limited in duration.

(15) "Qualified alternative energy resource" has the same meaning as in RCW 19.29A.090.

(16) "Station generating capability" means the maximum load a generator can sustain over a given period of time without exceeding design limits, and measured using maximum continuous electric generation capacity, less net auxiliary load, at average ambient temperature and barometric pressure.

(17) "Total carbon dioxide emissions" means:

(a) For a fossil-fueled thermal electric generation facility described under RCW [80.70.020](#)(1)

(a) and (b), the amount of carbon dioxide emitted over a thirty-year period based on the manufacturer's or designer's guaranteed total net station generating capability, new equipment heat rate, an assumed sixty percent capacity factor for facilities under the council's jurisdiction or sixty percent of the operational limitations on facilities subject to an order of approval, and taking into account any enforceable limitations on operational hours or fuel types and use; and

(b) For a fossil-fueled thermal electric generation facility described under RCW [80.70.020](#)(1) (c) and (d), the amount of carbon dioxide emitted over a thirty-year period based on the proposed increase in the amount of electrical output of the facility that exceeds the station generating capability of the facility prior to the applicant applying for certification or an order of approval pursuant to RCW [80.70.020](#)(1) (c) and (d), new equipment heat rate, an assumed sixty percent capacity factor for facilities under the council's jurisdiction or sixty percent of the operational limitations on facilities subject to an order of approval, and taking into account any enforceable limitations on operational hours or fuel types and use.

## **173-407-030- Carbon Dioxide Mitigation Program Applicability**

**1. Statutory Authority for a Carbon Dioxide Mitigation Program.** RCW 70.94.892(1) states that *"For fossil-fueled electric generation facilities having more than twenty-five thousand kilowatts station generating capability but less than three hundred fifty thousand kilowatts station generating capability, except for fossil-fueled floating thermal electric generation facilities under the jurisdiction of the energy facility site evaluation council pursuant to RCW 80.50.010, the department or authority shall implement a carbon dioxide mitigation program consistent with the requirements of chapter 80.70 RCW."*

**2. Statutory Carbon Dioxide Mitigation Program Applicability Requirements.** RCW 80.70.020 describes the applicability requirements and is reprinted below:

*(1) The provisions of this chapter apply to:*

*(a) New fossil-fueled thermal electric generation facilities with station-generating capability of three hundred fifty thousand kilowatts or more and fossil-fueled floating thermal electric generation facilities of one hundred thousand kilowatts or more under RCW 80.50.020(14)(a), for which an application for site certification is made to the council after July 1, 2004;*

*(b) New fossil-fueled thermal electric generation facilities with station-generating capability of more than twenty-five thousand kilowatts, but less than three hundred fifty thousand kilowatts, except for fossil-fueled floating thermal electric generation facilities under the council's jurisdiction, for which an application for an order of approval has been submitted after July 1, 2004;*

*(c) Fossil-fueled thermal electric generation facilities with station-generating capability of three hundred fifty thousand kilowatts or more that have an existing site certification agreement and, after July 1, 2004, apply to the council to increase the output of carbon dioxide emissions by fifteen percent or more through permanent changes in facility operations or modification or equipment; and*

*(d) Fossil-fueled thermal electric generation facilities with station-generating capability of more than twenty-five thousand kilowatts, but less than three hundred fifty thousand kilowatts, except for fossil-fueled floating thermal electric generation facilities under the council's jurisdiction, that have an existing order of approval and, after July 1, 2004, apply to the department or authority, as appropriate, to permanently modify the facility so as to increase its station-generating capability by at least twenty-five thousand kilowatts or to increase the output of carbon dioxide emissions by fifteen percent or more, whichever measure is greater.*

- 3. New Facilities.** Any Fossil-fueled thermal electric generating facility is required to mitigate CO<sub>2</sub> emissions as described in Chapter 80.70 RCW, if the facility meets the following criteria:
  - a. An Application was received after July 1, 2004;
  - b. The station-generating capability is below 350 MWe and above 25 MWe;
  - c. The facility is not a fossil-fueled floating thermal electric generation facility subject to regulation by the Energy Facility Site Evaluation Council.
- 4. Modifications to existing facilities.** A fossil-fueled thermal electric generating facility seeking to modify the facility or any electrical generating units is required to mitigate the increase of the emission of CO<sub>2</sub>, as described in WAC 80.70. 020, when the following occur:
  - a. The application was received after July 1, 2004;
  - b. The unmodified station generating capability is more than 25 MWe and less than 350 MWe;
  - c. The modification to the fossil-fueled thermal electric generating facility or units will increase electrical out by the greater of:
    - (i) at least 25 MWe or
    - (ii) an increase in the annual emissions of CO<sub>2</sub> of 15% or more;
  - d. The facility or the modification is not under the jurisdiction of the Energy Facility Site Evaluation Council;
- 5. Examples of fossil-fueled thermal electric generation units.** The following are some examples of Fossil-fueled thermal electric generating units:
  - a. Coal, oil, natural gas, or coke fueled steam generating units (boilers) supplying steam to a steam turbine - electric generator;
  - b. Simple cycle combustion turbine attached to an electric generator;
  - c. Combined cycle combustion turbines (with and without duct burners) attached to an electric generator and supplying steam to a steam turbine - electric generator;
  - d. Coal gasification units, or similar devices, where the synthesis gas produced is used to fuel a combustion turbine, boiler or similar device used to power an electric generator;
  - e. Hydrocarbon reformer emissions where the hydrogen produced is used in a fuel cell;
  - f. Stationary, reciprocating internal combustion engines using a fossil fuel used for emergency, peaking or baseload electric generation.

- 6. Exempt units.** Any facility producing electricity that is regulated under WAC 173-434.

## **173-407-040-Carbon Dioxide Mitigation Program Fees**

- 1) Statutory Authorization.** RCW 70.94.892 authorizes Ecology to determine, assess, and collect fees sufficient to cover costs to review and approve or deny the carbon

dioxide mitigation plan components of an order of approval, and to cover additional costs to monitor conformance with the carbon dioxide mitigation components of the registration and air operating permit programs.

- 2) **Fees.** The fees for the carbon dioxide mitigation program are described in this section and listed in the table below. The fees listed are added to the fees established in WAC 173-400 and in WAC 173-401, when the carbon dioxide mitigation plan requirements are triggered.

| Activity                                | Fee   |
|---|---|
| <b>a. Application Review</b>            | \$300 <sup>1</sup>                                  |
| <b>b. Mitigation Plan approval</b>      |   |
| i. Payment to third party               | \$100 <sup>2</sup>                                  |
| ii. Purchase of CO <sub>2</sub> credits | \$300 <sup>3</sup>                                  |
| iii. Direct investment                  | \$600 <sup>4</sup>                                  |
| <b>c. Routine Compliance Monitoring</b> |   |
| i. Payment to third party               | \$100 <sup>5</sup> annually until full amount paid. |
| ii. Purchase of CO <sub>2</sub> credits | \$300 <sup>6</sup> annually                         |
| iii. Applicant Controlled Project       | \$600 <sup>7</sup> annually                         |

## 173-407-050 - Calculating Total Carbon Dioxide Emissions to be Mitigated.

1. **Step 1 is to calculate the total quantity of CO<sub>2</sub>.** The total quantity of CO<sub>2</sub> is referred to as the **maximum potential emissions of CO<sub>2</sub>**. The maximum potential emissions of CO<sub>2</sub> is defined as the annual CO<sub>2</sub> emission rate. The annual CO<sub>2</sub> emission rate is derived by the following formula or similar analysis:

$$CO_{2rate} = \frac{F_s \times K_s}{2204.6} \times T_s + \frac{F_1 \times K_1}{2204.6} \times T_1 + \frac{F_2 \times K_2}{2204.6} \times T_2 + \frac{F_3 \times K_3}{2204.6} \times T_3 \dots + \frac{F_n \times K_n}{2204.6} \times T_n$$

CO<sub>2rate</sub> = Maximum potential emissions in metric tons per year

F<sub>1 - n</sub> = Maximum design fuel firing rate in mmBTU/hour based on equipment in new condition

K<sub>1 - n</sub> = Conversion factor for the fuel(s) being evaluated in lb CO<sub>2</sub>/mmBtu for fuel F<sub>n</sub>

T<sub>1 - n</sub> = Hours per year fuel F<sub>n</sub> is allowed to be used. The Default is 8760 hours unless there is a limitation on hours in an order of approval.

<sup>1</sup> Estimated EE3 at 4 hours time

<sup>2</sup> Small fee primarily to check math and that the source is using an EFSEC approved qualified organization

<sup>3</sup> Same criteria as for basic plan review and to check that the credits purchased will be verifiable and from a reputable trading or marketing organization

<sup>4</sup> Estimated EE3 at 8 hours time

<sup>5</sup> Same as rational for <sup>2</sup> above

<sup>6</sup> Verify and confirm credits with the trading or marketing organization

<sup>7</sup> Review reports and document project progress

$F_s$  = Maximum design supplemental fuel firing rate in mmBTU/hour

$K_s$  = Conversion factor for the supplemental fuel being evaluated in lb CO<sub>2</sub>/mmBtu for fuel  $F_n$  given fuel.

$T_s$  = Hours per year supplemental fuel  $F_n$  is allowed. The Default is 8760 hours unless there is a limitation on hours in an order of approval.

(a) When there are multiple new fossil fueled electric generating units, the above calculation will be performed for each unit and the total CO<sub>2</sub> emissions of all units will be summed.

(b) When a unit or facility is allowed to use multiple fuels, the maximum allowed hours on the highest CO<sub>2</sub> producing fuels will be utilized for each fuel until the total of all hours per fuel add up to the allowable annual hours.

(c) When a new unit or facility is allowed to use multiple fuels without restriction in its approval order(s) this calculation will be performed assuming that the fuel with the highest CO<sub>2</sub> emission rate is used 100% of the time.

(d) When the annual operating hours are restricted for any reason, the total of all  $T_{1-n}$  hours equals the annual allowable hours of operation in the Order of Approval.

(e) Fuel to CO<sub>2</sub> Conversion factors:

| Fuel                               | $K_n$ lb/mmBtu                                       |
|------------------------------------|--|
| #2 oil                             | 158.16   |
| #4 oil                             | 160.96   |
| #6 oil                             | 166.67   |
| Lignite                            | 328.57   |
| Sub-bituminous coal                | 282.94   |
| Bituminous coal, low volatility    | 312.50   |
| Bituminous coal, medium volatility | 274.55   |
| Bituminous coal, high volatility   | 306.11   |
| Natural gas                        | 117.6  |
| Propane                            | 136.61   |
| Butane                             | 139.38   |
| Petroleum coke                     | 242.91   |
| Coal coke                          | 243.1  |
| Other fuels                        | Calculate based on carbon content of the fossil fuel |

2. **Step 2 - Insert the annual CO<sub>2</sub> rate to determine the Total Carbon Dioxide Emissions to be mitigated.** The formula below includes specifications that are part of the total carbon dioxide definition:

$$\text{Total CO}_2 \text{ Emissions} = \text{CO}_{2\text{rate}} \times 30 \times 0.6$$

3. **Step 3 - Determine and apply the Cogeneration Credit (if any).** Where cogeneration unit or facility qualifies for cogeneration credit, the cogeneration credit is the annual CO<sub>2</sub> emission rate (in metric tons per year) and is calculated as shown below or similar method:

$$CO_{2\text{credit}} = \frac{H_s}{2204.6} (K_z)$$

Where  $CO_{2credit}$  = the annual  $CO_2$  credit for cogeneration in metric tons/year

$H_s$  = annual heat energy supplied by the cogeneration plant to the "steam host" per the contract or other binding obligation/agreement between the parties in mmBtu/yr.

$K_a$  = the time weighted average  $CO_2$  emission rate constant for the cogeneration plant in lb  $CO_2$ /mmBtu supplied. The time weighted average is calculated similarly to the above method.

$$\text{Total } CO_2 \text{ Emissions} = CO_{2rate} \times 30 \times 0.6 - CO_{2credit} \times 30$$

#### 4. Step 4 -Apply the Mitigation Rate.

a. RCW 80.70.020(4) states that *"fossil-fueled thermal electric generation facilities that receive site certification approval or an order of approval shall provide mitigation for twenty percent of the total carbon dioxide emissions produced by the facility."*

b. The  $CO_2$  emissions mitigation quantity is determined by the following formula or similar method:

$$\text{Mitigation Quantity} = CO_{2rate} \times 30 \times 0.6 \times 0.2 - CO_{2credit} \times 30$$

Mitigation quantity = the total  $CO_2$  emissions to be mitigated in metric tons

$CO_{2rate}$  = the annual maximum  $CO_2$  emissions from the generating facility in tons/year

30 = 30 years of operating time to be mitigated

0.6 = capacity utilization of the generating facility

0.2 = the mitigation factor in RCW 80.70.020(4)

$CO_{2credit}$  = cogeneration credit

#### 5. Additional restrictions for modifications to an existing facility not involving installation of new generating units. The quantity of $CO_2$ to be mitigated is calculated by the same methods used for the new generating units with the following restrictions:

- a) The quantity of  $CO_2$  subject to mitigation is only that resulting from the modification and does not include the  $CO_2$  emissions occurring prior to the modification.
- b) An increase in operating hours or other operational limitations established in an Order of Approval is not an exempt modification under this regulation.<sup>8</sup> However, only emissions related to the increase in operating hours is subject to the  $CO_2$  mitigation program requirements.
- c) The annual emissions ( $CO_{2rate}$ ) is the difference between the premodification condition and the post-modification condition, but using the like new heat rate for the combustion equipment.

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<sup>8</sup> But this change in operating hours may be exempt under NSR for other pollutants. I read the modification provisions to include a change in hours as a covered modification.

- d) The cogeneration credit (CO<sub>2credit</sub>) may be used, but only if it is a new cogeneration credit, not a cogeneration agreement or arrangement established prior to July 1, 2004 or used in a prior CO<sub>2</sub> mitigation evaluation.

## 173-407-060 - Carbon Dioxide Mitigation Plan Requirements and Options

### 1. Once the Total Carbon Dioxide Emissions mitigation quantity is calculated, what is next?

The facility must mitigate that level of carbon dioxide emissions. A CO<sub>2</sub> mitigation plan is required and must be approved as part of the order of approval. RCW 80.70.020(2)(b) states that *"For fossil-fueled thermal electric generation facilities not under jurisdiction of the council, the order of approval shall require an approved carbon dioxide mitigation plan"*. A mitigation plan is a proposal that includes the process or means to achieve carbon dioxide mitigation through use of mitigation projects or carbon credits (RCW 80.70.010).

### 2. What are the Mitigation Plan Options?

The options are identified in RCW 80.70.020(3), which states that *"an applicant for a fossil-fueled thermal electric generation facility shall include one or a combination of the following carbon dioxide mitigation options as part of its mitigation plan:*

- (a) Payment to a third party to provide mitigation;*
- (b) Direct purchase of permanent carbon credits; or*
- (c) Investment in applicant-controlled carbon dioxide mitigation projects, including combined heat and power (cogeneration)."*

### 3. What are the requirements of the Payment to a Third Party Option?

The Payment to a Third Party Option requirements are found in RCW 80.70.020(5) & (6). Section (5) identifies the mitigation rate for this option and describes the process for changing the mitigation rate. Section (6) describes the payment options.

The current mitigation rate is **\$1.60 per metric ton** of carbon dioxide to be mitigated. If there is a co-generation plant, the monetary amount is based on the difference between 20% of the total carbon dioxide emissions and the cogeneration credit. This rate will change when the Energy Facility Site Evaluation Council adjusts it through the process described in RCW 80.70.020(5)(a) and (b).

An applicant may choose between **a lump sum payment or partial payment over a period of five years**. The **Lump Sum Payment** is described in RCW 80.70.020(6)(a) and (b). The payment amount is the mitigation quantity multiplied by the per ton mitigation rate. The entire payment amount is due to the Independent Qualified Organization no later than 120 days after the start of commercial operation.

The alternative to a one-time payment is a **Partial Payment** described in RCW 80.70.020(6)(c). Under this alternative, 20% of the total payment is due to the Independent Qualified Organization no later than 120 days after the start of commercial operation. A payment of the same amount [or an adjusted amount if the rate is changed under RCW



80.70.020(5)(a)] is due on the anniversary date of the initial payment for the next four consecutive years. In addition, the applicant is required to provide a letter of credit or comparable security for the remaining 80% at the time of the first payment. The letter of credit (or comparable security) must also include possible rate changes.

**4. What are the requirements of the Permanent Carbon Credits Option?**

RCW 80.70.030 identifies the criteria and specifies that these credits cannot be resold without approval from the Local Air Authority having jurisdiction or Ecology where there is no Local Air Authority. The permanent carbon credit criteria of RCW 80.70.030 is as follows:

- (a) Credits must derive from real, verified, permanent, and enforceable carbon dioxide or carbon dioxide equivalents emission mitigation not otherwise required by statute, regulation, or other legal requirements;*
- (b) The credits must be acquired after July 1, 2004; and*
- (c) The credits may not have been used for other carbon dioxide mitigation projects.*

**5. What are the requirements for the Applicant Controlled Mitigation Projects Option?**

RCW 80.70.040 identifies the requirements for Applicant Controlled Mitigation Projects. Sections (1)-(5) specify the criteria. Section (6) specifies that if federal requirements are adopted for carbon dioxide mitigation for fossil-fueled thermal electric generation facilities, Ecology or the Local Air Authority may deem the federal requirements equivalent and replace RCW 80.70.040 with the federal requirements.

The Applicant Controlled Mitigation Project must be:

- a.** Implemented through mitigation projects conducted directly by, or under the control of order of approval holder. (Section 1);
- b.** Approved by the Local Air Authority having jurisdiction or Ecology where there is no Local Air Authority and incorporated as a condition of the proposed order of approval.(Section 2);
- c.** Fully in place within a reasonable time after the start of commercial operation. Failure to implement an approved mitigation plan is subject to enforcement under chapter 70.94 RCW. (Section 3)

In addition, an order of approval holder may not use more than 20% of the total funds for the selection, monitoring, and evaluation of mitigation projects and the management and enforcement of contracts. (Section 4)

## **173-407-070 - Carbon Dioxide Mitigation Option Statement and Mitigation Plan Approval**

- 1.** Applicants must provide Ecology or the Local Air Authority with a statement selecting the Mitigation Option at the time the application is submitted.
- 2.** Applicants choosing to use the Payment to a Third Party or the Permanent Carbon Credit Option must provide Ecology or the Local Air Authority, as appropriate, with the

documentation to show the requirements are satisfied before an order or approval will be issued.

3. Applicants seeking to use the Applicant Controlled Mitigation Projects option must submit the entire mitigation plan to Ecology or the Local Air Authority. Ecology or a Local Air Authority having jurisdiction will review the plan. Under RCW 70.94.892(2)(b), the review criteria is based on whether the mitigation plan is consistent with the requirements of Chapter 80.70 RCW.
4. Upon completing the review phase, Ecology or the Local Air Authority having jurisdiction must approve or deny the mitigation plan.
5. Approved mitigation plans will become part of the Order of Approval.
6. Ecology or the Local Air Authority, depending on which entity issued the order of approval, will monitor the mitigation plan.

**173-407-080 - Enforcement.** Applicants or facilities violating the carbon dioxide mitigation program requirements are subject to the enforcement provisions of Chapter 70.94.RCW.

**173-407-090 - Severability.** The provisions of this regulation are severable. If any provision is held invalid, the application of that provision to other circumstances and the remainder of the regulation will not be affected.

**Attachment 1****Chapter 80.70 RCW  
CARBON DIOXIDE MITIGATION****RCW SECTIONS**

[80.70.010](#) Definitions.

[80.70.020](#) Applicability of chapter -- Carbon dioxide mitigation plan -- Mitigation by a third party.

[80.70.030](#) Permanent carbon credits.

[80.70.040](#) Direct investment mitigation projects -- Enforcement -- Federal requirements may replace this section.

[80.70.050](#) Independent qualified organizations with experience in mitigation activities -- Council oversight -- Reports.

[80.70.060](#) Costs to be assessed against applicants and holders of site certification agreements.

[80.70.070](#) Rules.

**RCW 80.70.010  
Definitions.**

The definitions in this section apply throughout this chapter unless the context clearly requires otherwise.

(1) "Applicant" has the meaning provided in RCW 80.50.020 and includes an applicant for a permit for a fossil-fueled thermal electric generation facility subject to RCW 70.94.152 and [80.70.020](#)(1) (b) or (d).

(2) "Authority" means any air pollution control agency whose jurisdictional boundaries are coextensive with the boundaries of one or more counties.

(3) "Carbon credit" means a verified reduction in carbon dioxide or carbon dioxide equivalents that is registered with a state, national, or international trading authority or exchange that has been recognized by the council.

(4) "Carbon dioxide equivalents" means a metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential.

(5) "Cogeneration credit" means the carbon dioxide emissions that the council, department, or authority, as appropriate, estimates would be produced on an annual basis by a stand-alone industrial and commercial facility equivalent in operating characteristics and output to the

industrial or commercial heating or cooling process component of the cogeneration plant.

(6) "Cogeneration plant" means a fossil-fueled thermal power plant in which the heat or steam is also used for industrial or commercial heating or cooling purposes and that meets federal energy regulatory commission standards for qualifying facilities under the public utility regulatory policies act of 1978.

(7) "Commercial operation" means the date that the first electricity produced by a facility is delivered for commercial sale to the power grid.

(8) "Council" means the energy facility site evaluation council created by RCW 80.50.030.

(9) "Department" means the department of ecology.

(10) "Fossil fuel" means natural gas, petroleum, coal, or any form of solid, liquid, or gaseous fuel derived from such material to produce heat for the generation of electricity.

(11) "Mitigation plan" means a proposal that includes the process or means to achieve carbon dioxide mitigation through use of mitigation projects or carbon credits.

(12) "Mitigation project" means one or more of the following:

(a) Projects or actions that are implemented by the certificate holder or order of approval holder, directly or through its agent, or by an independent qualified organization to mitigate the emission of carbon dioxide produced by the fossil-fueled thermal electric generation facility. This term includes but is not limited to the use of, energy efficiency measures, clean and efficient transportation measures, qualified alternative energy resources, demand side management of electricity consumption, and carbon sequestration programs;

(b) Direct application of combined heat and power (cogeneration);

(c) Verified carbon credits traded on a recognized trading authority or exchange; or

(d) Enforceable and permanent reductions in carbon dioxide or carbon dioxide equivalents through process change, equipment shutdown, or other activities under the control of the applicant and approved as part of a carbon dioxide mitigation plan.

(13) "Order of approval" means an order issued under RCW 70.94.152 with respect to a fossil-fueled thermal electric generation facility subject to RCW [80.70.020](#)(1) (b) or (d).

(14) "Permanent" means that emission reductions used to offset emission increases are assured for the life of the corresponding increase, whether unlimited or limited in duration.

(15) "Qualified alternative energy resource" has the same meaning as in RCW 19.29A.090.

(16) "Station generating capability" means the maximum load a generator can sustain over a

given period of time without exceeding design limits, and measured using maximum continuous electric generation capacity, less net auxiliary load, at average ambient temperature and barometric pressure.

(17) "Total carbon dioxide emissions" means:

(a) For a fossil-fueled thermal electric generation facility described under RCW [80.70.020](#)(1) (a) and (b), the amount of carbon dioxide emitted over a thirty-year period based on the manufacturer's or designer's guaranteed total net station generating capability, new equipment heat rate, an assumed sixty percent capacity factor for facilities under the council's jurisdiction or sixty percent of the operational limitations on facilities subject to an order of approval, and taking into account any enforceable limitations on operational hours or fuel types and use; and

(b) For a fossil-fueled thermal electric generation facility described under RCW [80.70.020](#)(1) (c) and (d), the amount of carbon dioxide emitted over a thirty-year period based on the proposed increase in the amount of electrical output of the facility that exceeds the station generation capability of the facility prior to the applicant applying for certification or an order of approval pursuant to RCW [80.70.020](#)(1) (c) and (d), new equipment heat rate, an assumed sixty percent capacity factor for facilities under the council's jurisdiction or sixty percent of the operational limitations on facilities subject to an order of approval, and taking into account any enforceable limitations on operational hours or fuel types and use.

[2004 c 224 § 1.]

## **RCW 80.70.020**

### **Applicability of chapter -- Carbon dioxide mitigation plan -- Mitigation by a third party.**

(1) The provisions of this chapter apply to:

(a) New fossil-fueled thermal electric generation facilities with station-generating capability of three hundred fifty thousand kilowatts or more and fossil-fueled floating thermal electric generation facilities of one hundred thousand kilowatts or more under RCW 80.50.020(14)(a), for which an application for site certification is made to the council after July 1, 2004;

(b) New fossil-fueled thermal electric generation facilities with station-generating capability of more than twenty-five thousand kilowatts, but less than three hundred fifty thousand kilowatts, except for fossil-fueled floating thermal electric generation facilities under the council's jurisdiction, for which an application for an order of approval has been submitted after July 1, 2004;

(c) Fossil-fueled thermal electric generation facilities with station-generating capability of three hundred fifty thousand kilowatts or more that have an existing site certification agreement and, after July 1, 2004, apply to the council to increase the output of carbon dioxide emissions by fifteen percent or more through permanent changes in facility operations or modification or equipment; and

(d) Fossil-fueled thermal electric generation facilities with station-generating capability of more than twenty-five thousand kilowatts, but less than three hundred fifty thousand kilowatts, except for fossil-fueled floating thermal electric generation facilities under the council's jurisdiction, that have an existing order of approval and, after July 1, 2004, apply to the department or authority, as appropriate, to permanently modify the facility so as to increase its station-generating capability by at least twenty-five thousand kilowatts or to increase the output of carbon dioxide emissions by fifteen percent or more, whichever measure is greater.

(2)(a) A proposed site certification agreement submitted to the governor under RCW 80.50.100 and a final site certification agreement issued under RCW 80.50.100 shall include an approved carbon dioxide mitigation plan.

(b) For fossil-fueled thermal electric generation facilities not under jurisdiction of the council, the order of approval shall require an approved carbon dioxide mitigation plan.

(c) Site certification agreement holders or order of approval holders may request, at any time, a change in conditions of an approved carbon dioxide mitigation plan if the council, department, or authority, as appropriate, finds that the change meets all requirements and conditions for approval of such plans.

(3) An applicant for a fossil-fueled thermal electric generation facility shall include one or a combination of the following carbon dioxide mitigation options as part of its mitigation plan:

(a) Payment to a third party to provide mitigation;

(b) Direct purchase of permanent carbon credits; or

(c) Investment in applicant-controlled carbon dioxide mitigation projects, including combined heat and power (cogeneration).

(4) Fossil-fueled thermal electric generation facilities that receive site certification approval or an order of approval shall provide mitigation for twenty percent of the total carbon dioxide emissions produced by the facility.

(5) If the certificate holder or order of approval holder chooses to pay a third party to provide the mitigation, the mitigation rate shall be one dollar and sixty cents per metric ton of carbon dioxide to be mitigated. For a cogeneration plant, the monetary amount is based on the difference between twenty percent of the total carbon dioxide emissions and the cogeneration credit.

(a) Through rule making, the council may adjust the rate per ton biennially as long as any increase or decrease does not exceed fifty percent of the current rate. The department or authority shall use the adjusted rate established by the council pursuant to this subsection for fossil-fueled thermal electric generation facilities subject to the provisions of this chapter.

(b) In adjusting the mitigation rate the council shall consider, but is not limited to, the current market price of a ton of carbon dioxide. The council's adjusted mitigation rate shall be consistent

with RCW 80.50.010(3).

(6) The applicant may choose to make to the third party a lump sum payment or partial payment over a period of five years.

(a) Under the lump sum payment option, the payment amount is determined by multiplying the total carbon dioxide emissions by the twenty percent mitigation requirement under subsection (4) of this section and by the per ton mitigation rate established under subsection (5) of this section.

(b) No later than one hundred twenty days after the start of commercial operation, the certificate holder or order of approval holder shall make a one-time payment to the independent qualified organization for the amount determined under subsection (5) of this section.

(c) As an alternative to a one-time payment, the certificate holder or order of approval holder may make a partial payment of twenty percent of the amount determined under subsection (5) of this section no later than one hundred twenty days after commercial operation and a payment in the same amount or as adjusted according to subsection (5)(a) of this section, on the anniversary date of the initial payment in each of the following four years. With the initial payment, the certificate holder or order of approval holder shall provide a letter of credit or other comparable security acceptable to the council or the department for the remaining eighty percent mitigation payment amount including possible changes to the rate per metric ton from rule making under subsection (5)(a) of this section.

[2004 c 224 § 2.]

#### **RCW 80.70.030**

##### **Permanent carbon credits.**

(1) Carbon dioxide mitigation plans relying on purchase of permanent carbon credits must meet the following criteria:

(a) Credits must derive from real, verified, permanent, and enforceable carbon dioxide or carbon dioxide equivalents emission mitigation not otherwise required by statute, regulation, or other legal requirements;

(b) The credits must be acquired after July 1, 2004; and

(c) The credits may not have been used for other carbon dioxide mitigation projects.

(2) Permanent carbon credits purchased for project mitigation shall not be resold unless approved by the council, department, or authority.

[2004 c 224 § 3.]

#### **RCW 80.70.040**

**Direct investment mitigation projects -- Enforcement -- Federal requirements may replace this section.**

(1) The carbon dioxide mitigation option that provides for direct investment shall be implemented through mitigation projects conducted directly by, or under the control of, the certificate holder or order of approval holder.

(2) Mitigation projects must be approved by the council, department, or authority, as appropriate, and made a condition of the proposed and final site certification agreement or order of approval. Direct investment mitigation projects shall be approved if the mitigation projects provide a reasonable certainty that the performance requirements of the mitigation projects will be achieved and the mitigation projects were implemented after July 1, 2004. No certificate holder or order of approval holder shall be required to make direct investments that would exceed the cost of making a lump sum payment to a third party, had the certificate holder or order of approval holder chosen that option under RCW [80.70.020](#).

(3) Mitigation projects must be fully in place within a reasonable time after the start of commercial operation. Failure to implement an approved mitigation plan is subject to enforcement under chapter 80.50 or 70.94 RCW.

(4) The certificate holder or order of approval holder may not use more than twenty percent of the total funds for the selection, monitoring, and evaluation of mitigation projects and the management and enforcement of contracts.

(5)(a) For facilities under the jurisdiction of the council, the implementation of a carbon dioxide mitigation project, other than purchase of a carbon credit shall be monitored by an independent entity for conformance with the performance requirements of the carbon dioxide mitigation plan. The independent entity shall make available the mitigation project monitoring results to the council.

(b) For facilities under the jurisdiction of the department or authority pursuant to RCW [80.70.020](#)(1) (b) or (c), the implementation of a carbon dioxide mitigation project, other than a purchase of carbon dioxide equivalent emission reduction credits, shall be monitored by the department or authority issuing the order of approval.

(6) Upon promulgation of federal requirements for carbon dioxide mitigation for fossil-fueled thermal electric generation facilities, those requirements may be deemed by the council, department, or authority to be equivalent and a replacement for the requirements of this section.

[2004 c 224 § 4.]

#### **RCW 80.70.050**

##### **Independent qualified organizations with experience in mitigation activities -- Council oversight -- Reports.**

(1) The council shall maintain a list of independent qualified organizations with proven experience in emissions mitigation activities and a demonstrated ability to carry out their activities in an efficient, reliable, and cost-effective manner.

(2) An independent qualified organization shall not use more than twenty percent of the total



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funds for selection, monitoring, and evaluation of mitigation projects and the management and enforcement of contracts. None of these funds shall be used to lobby federal, state, and local agencies, their elected officials, officers, or employees.

(3) Before signing contracts to purchase offsets with funds from certificate holders or order of approval holders, an independent qualified organization must demonstrate to the council that the mitigation projects it proposes to use provides a reasonable certainty that the performance requirements of the carbon dioxide mitigation projects will be achieved.

(4) The independent qualified organization shall permit the council to appoint up to three persons to inspect plans, operation, and compliance activities of the organization and to audit financial records and performance measures for carbon dioxide mitigation projects using carbon dioxide mitigation money paid by certificate holders or order of approval holders under this chapter.

(5) An independent qualified organization must file biennial reports with the council, the department, or authority on the performance of carbon dioxide mitigation projects, including the amount of carbon dioxide reductions achieved and a statement of cost for the mitigation period.

[2004 c 224 § 5.]

#### **RCW 80.70.060**

##### **Costs to be assessed against applicants and holders of site certification agreements.**

Reasonable and necessary costs incurred by the council in implementing and administering this chapter shall be assessed against applicants and holders of site certification agreements that are subject to the requirements of this chapter.

[2004 c 224 § 6.]

#### **RCW 80.70.070**

##### **Rules.**

The council, department, and authority shall adopt rules to carry out this chapter.

[2004 c 224 § 7.]

## Attachment 2

**RCW 70.94.892****Carbon dioxide mitigation -- Fees.**

(1) For fossil-fueled electric generation facilities having more than twenty-five thousand kilowatts station generating capability but less than three hundred fifty thousand kilowatts station generating capability, except for fossil-fueled floating thermal electric generation facilities under the jurisdiction of the energy facility site evaluation council pursuant to RCW 80.50.010, the department or authority shall implement a carbon dioxide mitigation program consistent with the requirements of chapter 80.70 RCW.

(2) For mitigation projects conducted directly by or under the control of the applicant, the department or local air authority shall approve or deny the mitigation plans, as part of its action to approve or deny an application submitted under RCW [70.94.152](#) based upon whether or not the mitigation plan is consistent with the requirements of chapter 80.70 RCW.

(3) The department or authority may determine, assess, and collect fees sufficient to cover the costs to review and approve or deny the carbon dioxide mitigation plan components of an order of approval issued under RCW [70.94.152](#). The department or authority may also collect fees sufficient to cover its additional costs to monitor conformance with the carbon dioxide mitigation plan components of the registration and air operating permit programs authorized in RCW [70.94.151](#) and [70.94.161](#). The department or authority shall track its costs related to review, approval, and monitoring conformance with carbon dioxide mitigation plans.

[2004 c 224 § 8.]

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